REMARKS

These remarks and the accompanying amendments are responsive to the non-final Office Action dated March 3, 2006 (hereinafter referred to as the "Office Action") having a shortened statutory period for response that expired June 3, 2006. A petition and fee for a two month extension of time extending the period for response until today, August 3, 2006, accompanies this response. At the time of the last examination, Claims 12-23 were pending, of which Claims 12, 13, 15, 16, 18, 21 and 22 are independent. All of the independent claims are amended herein.

Section 2 of the Office action rejects Claims 12, 15-17 and 21-23 under 35 U.S.C. 103(a) as being unpatentable over United States patent number 6,285,655 B1 issued to Lundby, et al. (the patent hereinafter referred to simply as "Lundby") in view of United States Reissue patent number US RE 37,420 E reissued to Asano, et al. (the reissue patent hereinafter referred to simply as "Asano").

Lundby discloses that the switch 230 directs the signals spread by using Walsh sequence from traffic channels 212a-212n to the proper summer 240, and each of the summers 240a-240k sum signals from all traffic channels 212 and pilot channels 212 and pilot channel 232. Thus, signals summed in each of the summers 240a-240k include traffic data 1-N and a pilot channel, and these signals summed are spread with the short PN sequence to be transmitted in the modulator and transmitter 114. As mentioned above, in Lundby, one channel group including one pilot channel is transmitted from the modulator and transmitter 114. That is, the base station of Lundby is a base station in which one orthogonal code set (channel group) is transmitted from a plurality of transmitters 114.

In contrast, a base station of claim 12 is a base station in which a plurality of orthogonal code sets (channel group) are arranged in a same sector and a pilot channel is arranged in each of

the orthogonal code sets. That is, in the present invention of claim 12, a signal of each of a plurality of channels included in each of the plurality of channel groups is spread by using an orthogonal code, and the signals spread by using the orthogonal code are summed up to combine for each the plurality of channel groups, so that sets of the signals spread by using the orthogonal code are generated, each of which corresponds to each of the plurality of channel groups, and each of the sets of the signals spread by using the orthogonal code is spread by using a spreading code. Further, each of the sets of the signals spread by using the orthogonal code and the spreading code is summed up to combine. Thus, signals to be transmitted include a pluraliy of signal sets each of which corresponds to channel group including one pilot channel. Then, the sets of the signals which are summed up to combine are transmitted from one transmitter. (See the specification on page 13 line 8 to on page 15 line 5, and Fig.4 for support).

As mentioned above, Lundby does not disclose or teach that a plurality of orthogonal code sets (channel group) are arranged in a same sector, and a pilot channel is arranged in each of the orthogonal code sets.

Asano discloses that spread codes resulting from multiplication of m orthogonal spread codes and a first PN series (PN(t)) are assigned to channel number #1 to #m in the same cell, and spread codes resulting from multiplication of the same m orthogonal spread codes as above and a second PN series (PN(t-Φ)) are assigned to channel numbers # (m+1) to #2m.

However, Asano does not disclose or teach that a plurality of orthogonal code sets (channel group) are arranged in a same sector, and a pilot channel is arranged in each of the orthogonal code sets.

Even if Lundby and Asano are combined (the appropriateness of which not being conceded), since each of traffic data is spread by using the first and second PN series as well as

the Walsh sequence, the traffic data are divided into a first traffic channel group which is spread by using the first PN series and a second traffic channel group which is spread by using the second PN series. As a result, it is possible to increase the number of the traffic channel 212 of Lundby et al.

Each of data from the first and second traffic channel group is directed to each summers 240a-240k via the switch 230, and is summed with the pilot chnnel at each of the summers 240a-240k. Accordingly, even if Lundby and Asano are combined, data summed and summer 240 are data from the first traffic channel group and the second traffic channel group and the pilot channel. That is, the combination of Lundby and Asano only results in increase in the number of traffic data.

That is, Lundby and Asano does not disclose that a pilot channel is arranged in each channel groups included in data set transmitted from a same transmitter, i.e. a plurality of orthogonal code sets (channel group) are arranged in a same sector, and a pilot channel is arranged in each of the orthogonal code sets. Therefore, one skill in the art can not reach to an idea that when above-mentioned sum is performed at the summers 240a-240k, data set from the first traffic channel group and a pilot channel are summed and data set from the second traffic channel group and a pilot channel are summed.

Accordingly, claim 12 is not unpatentable over Lundby and Asano, either singly or in combination.

Because Claims 15, 16, 21, 22 are amended like Claim 12, Claims 15, 16, 21, 22 are not unpatentable over Lundby and Asano (either singly or in combination) for at least the reasons provided above for Claim 12. The same thing can be said for Claim 17 and Claim 23 which

depend on Claim 16 and Claim 22, respectively. Accordingly, the 35 U.S.C. 103(a) rejection of Claims 12, 15-17 and 21-23 should be withdrawn.

Section 3 of the Office Action rejected Claims 13, 14 and 18-20 as being unpatentable over Lundby in view and Asano, and further in view of United States patent number 6,094,450 issued to Shockey (the patent hereinafter referred to as "Shockey").

Shockey discloses that a pilot PN sequence generator 14 is controlled by a PN clock 18 which operates at a higher frequency than a data bit rate from a data source 26. However, Shockey does not disclose or teach that a plurality of orthogonal code sets (channel group) are arranged in a same sector, and a pilot channel is arranged in each of the orthogonal code sets.

Accordingly, Claim 13 is not unpatentable over Lundby, Asano, and Shockey, etiehr singly or in combination. Because Claims 18 are amended like Claim 13, Claim 18 is not unpatentable over Lundby, Asano, and Shockey for at least the reasons provided for Claim 13. Also, the same thing can be said for Claim 14 and Claim 19, 20 which depend on Claim 13 and Claim 18, respectively. Accordingly, the 35 U.S.C. 103(a) rejection of Claims 13, 14 and 18-20 should be withdrawn.

Therefore, favorable action is respectfully requested. In the event that the Examiner finds remaining impediment to a prompt allowance of this application that may be clarified through a telephone interview, the Examiner is requested to contact the undersigned attorney.

Dated this 3rd day of August, 2006.

Respectfully submitted,

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